

**15"/ 17"/ 19" TFT-LCD MONITOR
WITH
VIDEO INPUTS**

**588/ 788/ 988 Video Series
USER'S MANUAL**

Rev. 1.0

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1. Introduction

Product Description

Congratulations on your purchase of the **588/ 788/ 988 video series** LCD monitor. It incorporates high quality display into a small light-weighted module. It has power-saving capabilities and emits no radiation. You will certainly benefit from this monitor in lots of ways; to name some of them: comfort, safety, space-saving and environmental protection.

These LCD monitors incorporates **15"/ 17"/ 19"** color active matrix thin-film-transistor (TFT) liquid crystal display to provide superior display performance. For 15" monitor, the maximum resolution is **XGA 1024 x 768**. For 17" and 19" monitors, the maximum resolution is **SXGA 1280 x 1024**. They all are ideal for displaying complex graphics and high definition images. Their outstanding capabilities include stereo audio, high image quality with S-video, standard RCA composite video/audio and OSD (On Screen Display) controls.

Package Contents

Included with your LCD monitor as following items :

- **15"/ 17"/ 19"** TFT LCD monitor
- 15 pin D-sub VGA signal cable
- Audio cable
- AC power cord
- AC/DC power adapter
- User's manual
- DVI signal cable (optional)

Product Features

- High brightness, high contrast ratio and wide viewing angle
- Wall mountable with VESA 75 bracket
- Built-in speakers with volume control
- Power management system conforms to VESA DPMS standard
- Advanced OSD control for picture quality adjustment
- Slim bezel design

Screen Cleaning Techniques

1. Gently clean the screen with a clean camel hair lens brush, or a soft, clean, lint-free cloth, to remove dust and other particles that can scratch the screen.
2. Do not apply pressure to the screen surface when wiping it clean.
3. Do not pour or spray any liquid directly onto the screen or casing. Chemical cleaners have been reported to damage the screen or case of the LCD monitor.

Additional

Read all of these instructions and save them for later use.

Follow all warnings and instructions on the product.

1. Product

- Do not block the vent holes in the case.
- Do not insert sharp objects or spill liquid into the LCD monitor through cabinet slots. They may cause accident fire, electric shock or failure.
- Disconnect the power plug from the AC outlet if you will not use it for an extended period of time.
- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks.
- Do not touch the screen directly with your fingers. You may damage the screen, and oil from your skin is difficult to remove.
- Do not apply pressure to screen. The LCD panel is very delicate.

2. Power

- Use the type of power indicated on label.

3. Plugs

- Do not remove any of the prongs of the monitor's three-pronged power plug.
- Disconnect the power plug from the AC outlet under following conditions :
 - If you will not use it for an extended period time.
 - When the power cord or plug is damaged or frayed.

- If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician.
- If the product exhibits a distinct change in performance, service may be required.

4. **Power and extension cords**

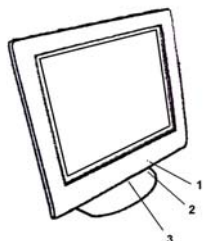
- Do not allow anything to rest on the power cord.
- Do not locate this product where persons will walk over the cord.
- Use the proper power cord with correct attachment plug type. If the power source is 120V AC, use a power cord that has UL and C-UL approvals. If the power source is a 240V AC supply, use the tandem (T blade) type attachment plug with ground conductor power cord that meets the respective European country's safety regulations, such as VDE for Germany.
- Do not over load wall outlets or power cords. Ensure that the total of all units plugged into the wall outlet does not exceed 10 amperes.
- Ensure that the total ampere ratings on all units plugged into the extension cord is not above the cord's rating.
- If the power supply cord, which came with your monitor, is to be connected to the PC instead of the wall outlet, Use an UL/TUV approved computers with receptacle rated 100~240V AC, 50/60Hz, 1.0A (minimum) only.

5. **Environment**

- Place the monitor on a flat and leveled surface.
- Place the monitor in a well-ventilated place.
- Keep the monitor away from overly hot, cold or humid places, places directly under sunlight, dusty surroundings, equipment that generate strong magnetic fields.
- Please adjust the frequency to **60** Hz after setting up the LCD monitor.
- Then push the OSD menu button and use the auto adjustment function to find the best mode of your computer.

2. Control Functions

The monitor digital control functions are located on the front panel. They are shown in the figure below and described in the following paragraphs.



1. Indicator LED
2. Power switch
3. Function keys

Function Selection

1. Press the knob “MENU/SELECT” to show the OSD menu. Then use the “△” and “▽” to select a function. Press the knob “AUTO/EXIT” to close the OSD menu.
2. With the knob “△” and “▽”, you can adjust the speaker volume on the monitor.
 - When you press the “▽”, the speakers are mute. Press the “△” and then the speakers are active.
 - When you press the knob “△”, the speaker volume OSD is shown. You can increase or decrease the volume by pressing the “△” and “▽”.
3. You can hold the knob “AUTO/EXIT” for more than 1 second to adjust the image quality automatically.

The OSD menu will close automatically after 3-10 seconds without operation and saves any changes you have made.

Function Adjustments

1. Signal Select

When there is no OSD menu display the knob “AUTO/EXIT” can select
VGA / DVI / CVBS / S-VIDEO.

2. Video

Contrast - Adjust the difference in luminance between light and dark areas of the image.



Brightness - Adjust the luminance level of the image.



Colour - Adjust the Color level of the image



Tint - Adjust the Tint level of the image



Sharpness - Adjust the Sharpness level of the image



Video Mode - Adjust the Video Mode for
Normal/Nature/Cinema/Sport/Vivid



Reset

- Recall the factory setting of the **Video** menu.



VGA

Contrast

- Adjust the difference in luminance between light and dark areas of the image.



Brightness

- Adjust the luminance level of the image.



Sharpness - Adjust the Sharpness level of the image



Color Temperature - Adjust Color Temperature

Cool(9300k)/User/Warm(6500k)/Nature(7500k)



User RGB - Adjusting R/G/B level of the image



Image



Auto Tune - Adjust geometry of the image automatically.

Position - Adjust the vertical & horizontal position of the image.

Phase - Adjust the horizontal sync phase of signal.

Clocks - Adjust the horizontal sync size of signal.

Reset - Recall the factory setting of the **VGA** menu.



3. Audio (Video & VGA)

Volume - Adjust the speaker volume.



4. Feature Controls (Video & VGA)

Sleep Timer - Select 10/20/30/40/50/60/70/80/90/Off



Language -Select Language English/Fran/Deu/Esp/Ita



OSD Controls -Select OSD Position /Rotation/Timer



Factory Recall - Recall Factory setting



3. Installation

Unpacking

Open the shipping carton and check the package contents.

If any items are missing or damaged, contact us immediately.

The package should include the following items:

- 15"/ 17"/ 19" TFT-LCD monitor
- User's manual
- Power cord
- DVI cable (optional)
- AC/DC power adapter
- VGA cable
- Audio cable

Installing the Monitor

This monitor is equipped with an auto sensing DC power adapter for voltage ranges of 100-240VAC, 60/50Hz. Follow these steps to install the monitor:

1. Before you connect the cables, made sure that the monitor and the system unit power switches are off.
2. Plug one end of the 15 pin-signal cable or DVI cable to the monitor and the other end to the video signal connector at the rear of the system. Tighten the two screws on the cable connector.
- 3.Connect the AC/DC power cord to the DC jack.
- 4.Connect the power cable.

4. Display Modes

Micro-controller Features

The micro-controller automatically detects the video board installed in your system. When you turn on the monitor, the micro-controller checks the display mode memory stored in the user setting area of the video board, and then the factory presetting area. It then adjusts to the proper display mode.

The micro-controller has the memory capacity to store different display modes, including timing formats and display-settings.

Factory Presetting Area

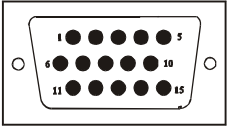
There are some preferred display modes preset in the micro-controller. These display modes are preset at the factory and include the most popular display modes currently available. The micro-controller searches for a proper display mode in this area if it fails to find a proper display mode in the user setting area.

	MODE	Resolution (Dots*lines)	Horizontal Freq.(KHz)	Vertical Freq.(Hz)	Remark
1.	VGA	640×350	31.5	70	Non-interlaced
2.	VGA	720×400	31.5	70	Non-interlaced
3.	VGA	640×480	31.5	60	Non-interlaced
4.	VESA/75	640×480	37.5	75	Non-interlaced
5.	VESA/60	800×600	37.9	60	Non-interlaced
6.	VESA/75	800×600	46.9	75	Non-interlaced
7.	VESA/60	1024×768	48.4	60	Non-interlaced
8.	VESA/70	1024×768	56.5	70	Non-interlaced
9.	VESA/75	1024×768	60.0	75	Non-interlaced
10.	VESA/60	1280×1024	64.0	60	Non-interlaced
11.	VESA/75	1280×1024	80.0	75	Non-interlaced

5. Signal Connector Pin-outs

To connect VGA, 8514A or IBM-compatible graphics adapters, use a 15 pin mini D-type male connector.

15-pin Mini D-type Male Connector					
Pin Assignment					
1	Red Video	6	Red Ground	11	Ground
2	Green Video	7	Green Ground	12	Serial Data/I/O
3	Blue Video	8	Blue Ground	13	H. Sync
4	Ground	9	No Connection	14	V. Sync
5	No Connection	10	Sync Ground	15	Serial Clock Input



6. Power Saving Features

When the power saving is active, the power indicator LED will be from Green Light to Amber. The power saving feature complies with these VESA power saving modes:

Mode	H. Sync.	V. Sync.	LED	Power Consumption
Normal	On	On	Green	< 50 Watts
Stand-by	Off	On	Amber	< 5 Watts
Suspend	On	Off	Amber	< 5 Watts
Off	Off	Off	Amber	< 1 Watts

The monitor uses the H. Sync and V. Sync signals to determine the operation mode to enter.

The monitor power-saving feature automatically turns off H. Sync and V. Sync if there is no input from the system for a certain period of time. To use this feature, you need a green PC that is compliant with the VESA power saving feature or a software utility to detect system input such as keyboard or mouse.

Time Settings

Time settings are adjusted from the system unit by software. To fulfill the

requirements in the NUTEK specification 803299/94 the total time from indicated inactivity to Power Saving position A2 (VESA OFF) must not be set more than 70 minutes. We recommend you switch off the monitor when you do not intend to use it for a while.

7. Product Specifications

7.1 15" series product specifications

Model	15" Series
Features Panel Type: Screen Size: Pixel Pitch: Brightness: Contrast Ratio: Response Time: Viewing Angle(H / V) Max. Resolution: Display Color	Active TFT-LCD 15" diagonal 0.297 (W) x 0.297 (H) mm Typical: 250 cd/m ² Typical: 500:1 Typical: 12 ms Typical: 130° / 120° 1024 (W) x 768 (H) 16.7 M
Video Input	Analog: 15-pin, D-sub connector x1 S-Video x1, RCA composite x1 Digital: DVI connector (optional)
Display Area	12 (W) x 9 (H) inch [304 (W) x 228 (H) mm]
Power Supply	
Input voltage:	100-240V /60-50Hz
Output rating:	12V DC, 3.0A
Power Consumption	25 watts (max.), 3 watts (standby)
Audio	2.5 watts x 2 built-in speaker RCA composite x1
Frequency	Horizontal:30-60 KHz; Vertical: 50-75 Hz
Dimensions(set size)	14.8 (H) x 14.69 (W) x 5.5 (D) inch [375(H) x 380(W) x 140(D) mm]
Safety & EMI	UL, CUL, FCC-B, CB, CE, TUV/GS
Weight	N.W.: 6.6 lbs (3.0 Kgs) G.W.: 8.0 lbs (3.6 Kgs)
Operating Conditions	5°C – 35°C; 20%-80% RH
Storage Conditions:	-20°C – 60°C; 10%-90% RH
Wall mountable	Yes, VESA 75 bracket

The typical value of brightness, contrast ratio, response time and viewing angle is subject to change without notice.

7.2 17" series product specifications

Model	17" Series
Features Panel Type: Screen Size: Pixel Pitch: Brightness: Contrast Ratio: Response Time: Viewing Angle(H / V) Max. Resolution: Display Color	Active TFT-LCD 17" diagonal 0.264 (W) x 0.264 (H) mm Typical: 300 cd/m ² Typical: 500:1 Typical: 8 ms Typical: 140° / 130° 1280 (W) x 1024 (H) 16.7M
Video Input	Analog: 15-pin, D-sub connector S-video x1, RCA composite x1 Digital: DVI connector (optional)
Display Area	13.3 (W) x 10.6 (H) inch [338 (W) x 270 (H) mm]
Power Supply	
Input voltage:	100-240V /60-50Hz
Output rating:	12V DC, 4.2A
Power Consumption	40 watts (max.), 3 watts (standby)
Audio	2.5 watts x 2 built-in speaker RCA composite x1
Frequency	Horizontal:30-82KHz; Vertical: 50-75Hz
Dimensions(set size)	14.8 (H) x 14.96 (W) x 5.5 (D) inch [375(H) x 380(W) x 140(D) mm]
Safety & EMI	UL, CUL, FCC-B, CB, CE, TUV/GS
Weight	N.W.: 12 lbs (5.5Kgs) G.W.: 16 lbs (7.0Kgs)
Operating Conditions	5°C – 35°C; 20%-80% RH
Storage Conditions:	-20°C – 60°C; 10%-90% RH
Wall mountable	Yes, VESA 75 bracket

The typical value of brightness, contrast ratio, response time and viewing angle is subject to change without notice.

7.3 19” series product specifications

Model	19” Series
Features Panel Type: Size: Pixel Pitch: Brightness: Contrast Ratio: Response Time: Viewing Angle(H / V) Max. Resolution: Display Color	Active TFT-LCD 19” diagonal 0.294 (W) ×0.294 (H) mm Typical: 300 cd/m ² Typical: 1000:1 Typical: 8 ms GTG Typical: 178°/178° 1280 (W) x 1024 (H) 16.7M
Video Input	Analog: 15-pin, D-sub connector S-video x1, RCA composite x1 Digital: DVI connector (optional)
Display Area	14.8 (W) x 11.8 (H) inch [376 (W) x 301 (H) mm]
Power Supply	
Input voltage:	100-240V /60-50Hz
Output rating:	12V DC, 4.2A
Power Consumption	50 watts (maximum), 3 watts (standby)
Audio	2.5 watts x 2 built-in speaker RCA composite x1
Frequency	Horizontal:30-82KHz; Vertical: 50-75Hz
Dimensions(set size)	16.7 (W) x 16.7 (H) x 6.9 (D) inch [425 (W) x 425 (H) x 175 (D) mm]
Safety & EMI	UL, CUL, FCC-B, CB, CE, TUV/GS
Weight	N.W.: 13.2 lbs (6.0Kgs) G.W.: 16.5 lbs (7.5Kgs)
Operating Conditions	5°C – 35°C; 20%-80% RH
Storage Conditions:	-20°C – 60°C; 10%-90% RH
Wall mountable	Yes, VESA 75 bracket

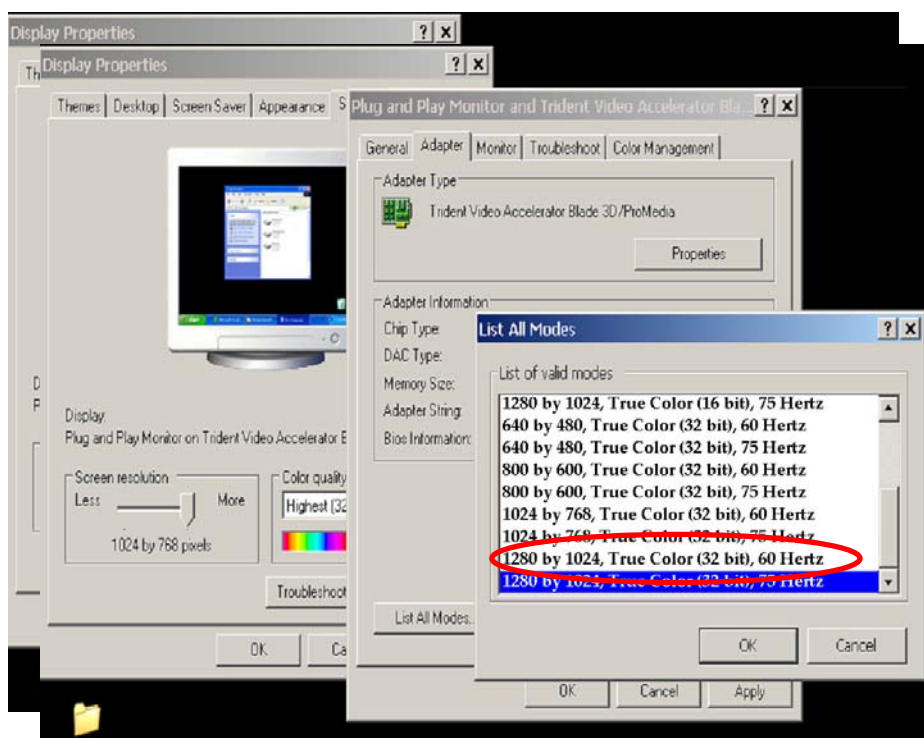
The optical specifications (brightness, contrast ratio, response time and viewing angle) depend on the LCD panel used, subject to change without notice.

8. Windows setup

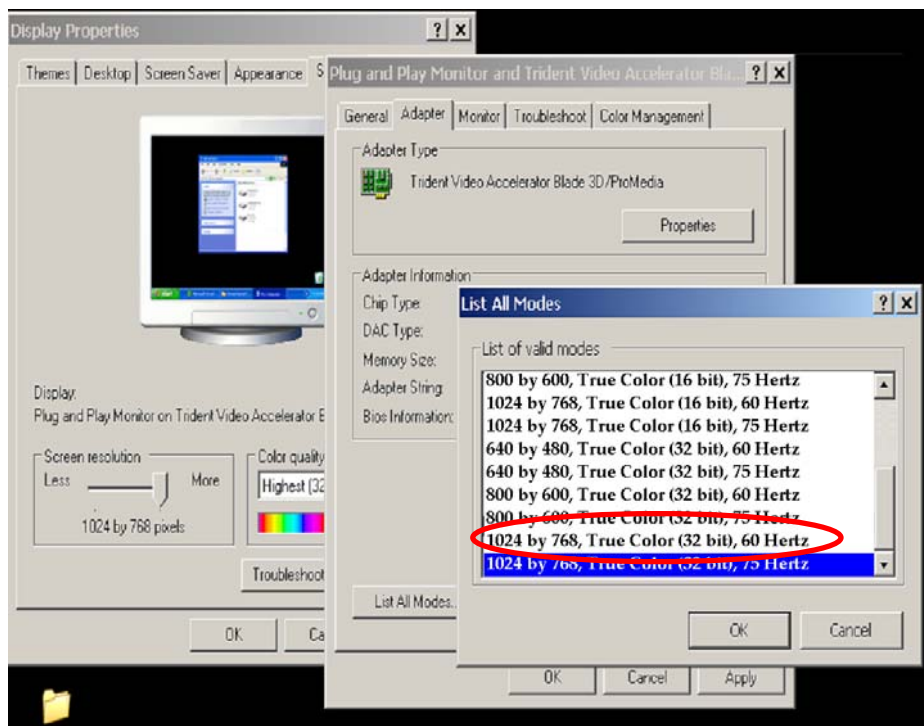
For the best display quality, please set the monitor type in Windows.

Control Panel > Display > Settings > Advanced > List All Modes

For 1280 ×1024, please set to “SXGA 1280 × 1024 @ 60Hz”



For 1024 × 768, please set to “XGA 1024 × 768 @ 60Hz



9. Trouble Shooting

1) Power on but no picture

- Make sure the VGA cable is tightly connected from the video output connector on the video card to the video input connector on the monitor.
- Make sure you are using the standard power adapter coming with the monitor.
- Check your video card if the driver is correctly installed. If there is no video signal from the video card, “NO INPUT SIGNAL” will show on the screen.

2) Wrong or abnormal colors

- If any color (red, green, or blue) is missing, check video cable to make sure it is securely connected. Loose pins in the cable connector can cause a bad connection.

3) The text and icon look blurry

- LCD monitor has a native resolution which pixels are produced by cells in fixed positions. When a resolution different from the native resolution is chosen, the LCD monitor uses various interpolation methods to achieve the pseudo resolution. To achieve the optimum viewing quality, choose the native resolution of the panel is recommended.
- Use “Auto Tuning” function to adjust image quality on the OSD menu or you can hold button AUTO for 1 seconds to do auto tuning.

4) Display position is incorrect

- Use “Auto Tuning” function to adjust image position on the OSD menu or you can hold button AUTO for 1 seconds to do auto tuning.

5) Speakers have no sound

- Make sure the audio cable is tightly connected from the audio output jack on

the PC to the audio input jack on the monitor.

6) Residue image

→ If an image remains on the screen for an extended period of time, it may be imprinted in the screen and leave a residue image. It is characteristic of liquid crystal and is not malfunction or deterioration of the liquid crystal. The residue image will disappear after a period of time. It is recommended to set up the screen saver for your LCD monitor.

7) Out of Rang

→ The first thing you need to check is the screen resolution. Usually “Out of Range” is caused by improper resolution setting. You can recover the proper screen resolution as the following steps for Windows: (Assumed that the optimal resolution and frequency setting is 1280x1024@ 60Hz.)

Boot the computer into **VGA Mode (F8)** [repeatedly] at startup.

Go to “**Control Panel**”, double click on “**Display**”, click on the **SETTINGS** TAB, and click on the **ADVANCED** button.

Then Click on the **Adapter** TAB, click “**List All Modes**” and change the screen resolution to 1280x1024. (You can select 16 bit or 32 bit color which depends on your video card capability.)

Select “**1280 by 1024, High Color (16 bit), Default Refresh**”

Click on the “**OK**” and “**APPLY**”.

After clicking the **APPLY** button, a message will be displayed “Your desktop has been reconfigured. Do you want to keep these settings?”

Click “**Yes**” and “**OK**”. Then click “OK” on the Display Properties window.

Restart your PC

After you restart, go back to “List All Modes” to adjust your screen refresh rate to 60 Hertz.

The “Out of Range” may happen if you switch monitor A to monitor B for your PC. Whenever you change the monitor for your PC, your PC may detect it as a new hardware and automatically install a proper driver for the monitor. So, you will have both monitor A and monitor B drivers on your PC. Sometimes the two monitor drivers may conflict each other and cause “Out of Range”. You can resolve “Out of Range” by uninstalling both monitor drivers and reboot your PC. The Windows will automatically detect the new hardware and install a proper driver for the monitor. Here is a quick way to uninstall the monitor drivers:

Right click on “**My Computer**”, select “**Properties**” and click on “**Hardware**”. Click on “**Device Manager**”, select “**Monitor**” and click on “+” in front of “**Monitor**”. Then you can see one of the monitor drivers called “**Plug and Play Monitor**”. A quick way is to uninstall all the monitor drivers and then let Windows automatically detect the new hardware. (Right click on the monitor driver and select “Uninstall”).
Restart your PC